



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,851	07/30/2003	Tae-eun Kwon	1293.1901	6163
21171	7590	07/31/2006	EXAMINER	
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			LEE, GUIYOUNG	
			ART UNIT	PAPER NUMBER
			2875	

DATE MAILED: 07/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/629,851

Applicant(s)

KWON, TAE-EUN

Examiner

Guiyoung Lee

Art Unit

2875

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5-26 and 28-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-26 and 28-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Prelim./Amdt.

1. Receipt is acknowledged of the Amendment filed 04/24/2006.
2. Claims 1-3, 5-26, and 28-39 are pending, and claims 4 and 27 have been cancelled.

Response to Arguments

3. Applicant's arguments filed 04/24/2006 have been fully considered but they are not persuasive. In response to applicant's arguments that Yokoyama reference does not illustrate the angle of the depressions with respect to the lengthwise direction, as broadly interpreted of the present claimed invention, Yokoyama's teaches the claimed limitation "the angle formed by the reflective slopes with respect to the lengthwise direction gradually becomes larger when moving further from a side of the guide onto which the light is incident". As disclosed in Fig. 13, the optical guide (2 in Fig. 13) has a plurality of reflective slopes (13), and the angle formed by the left side wall of the reflective slope (13) with respect to the lengthwise direction gradually becomes larger when moving further from a side (2a) of the guide which is the light (1) is incident. Therefore, the claimed limitation is still read on the Yokoyama reference. Further, Yokoyama shows that the sidewall of the reflective slope (13) have a stripe shape.

4. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) And *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir.

Art Unit: 2875

1992). In this case, Yokoyama discloses an optical guide having a plurality of reflective slopes and Yokoyama teaches that an enhanced uniform brightness distribution is provided because of the plurality of reflective slopes. Yokoyama does not teach the optical guide with a light source is applied in an image forming apparatus comprising a photoreceptor and an eraser. However, Tsutsumi shows an image forming device having a photoreceptor and an eraser. Further, Tsutsumi teaches the image forming device includes an optical guide having a plurality of reflective slopes. Further, Tsutsumi teaches that a single light emitting diode as a light source alternatively provided at one end of the light guide member (col. 8, line 54+). Therefore, it would be obvious to substitute Tsutsumi's optical guide with Yokoyama's optical guide having a plurality of reflective slopes as set forth in the claims in order to achieve uniform brightness distribution of the reflected light from the light source as required in the image forming device.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1, 6, 23-24, 28-33 are rejected under 35 U.S.C. 102(b) as being anticipated by Yokoyama et al. (US 5,584,556).

Re claims 1, 23-24, 29, 30-32, and 33: Yokoyama discloses an optical guide having a first surface (2c in Fig. 13) including a plurality of reflective slopes (13), each of the reflective slopes having a stripe shape, a second surface (2b), a light source (1), wherein the angle formed by the reflective slopes with respect to the lengthwise direction gradually becomes larger when moving further from a side of the guide onto which the light is incident (See the angles of each slopes of the grooves 12 increase when moving further away from the light source 1 as shown in Fig. 13). Yokoyama shows that the widths of the slopes (13) increase as shown in Fig. 13.

Re claims 6 and 28: Yokoyama discloses a triangular structure of the groove, and the plurality of slopes is parallel to one another (Fig. 13).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2-3, 5, 7-22, 25-26, and 34-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsutsumi et al. (US 5,850,585) in view of Yokoyama (US 5,584,556).

Re claims 7-12, 15-22, 34, and 37: Tsutsumi discloses the claimed image forming apparatus (Fig. 1) comprising an eraser (8) which initializes a surface potential of a photoreceptor medium, and an auxiliary transfer device (5 and 6), which facilitates transfer of a toner image by radiating

Art Unit: 2875

light on a surface of the photoreceptor medium, wherein the eraser (8) and the auxiliary transfer device comprise: a light source (LEDs 24 and 25 in Fig. 2) to emit light; and an optical guide (27) on a side of the apparatus having the light source, which guides the light emitted from the light source (24 and 25) and incident therethrough in a lengthwise direction, makes uniform the light in an effective width range of the lengthwise direction and outputs the uniform light, wherein the optical guide (27) comprises a first surface (the bottom surface of the light guide 27) to receive the incident light, comprising a plurality of reflective slopes (28) to reflect and make uniform the incident light. Tsutsumi does not disclose the angle formed by the reflective slopes with respect to the lengthwise direction gradually becomes larger when moving further from a side of the light guide onto which the light is incident. Yokoyama shows the angle formed by the reflective slopes with respect to the lengthwise direction gradually becomes larger when moving further from a side of the light guide onto which the light is incident (see the angles formed by the side wall of the grooves¹³ in Fig.13). Further, Yokoyama teaches the advantage of having the grooves with the increased depths (the angle formed by the grooves with the increased depths become larger), saying that “In this way, as with the light-conducting member of FIG 12, it is possible to cause the light to be uniformly emitted from the entire emitting surface 2b (col. 5, lines 46-49)”. It would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute Tsutsumi’s optical guide with Yokoyama’s optical guide having a plurality of reflective slopes having in order to achieve uniform brightness distribution of the reflected light from the light source as required in the image forming device.

Art Unit: 2875

Re claim 5: Yokoyama discloses the reflective slopes have a width that gradually become greater when moving closer to a side of the guide onto which the light is incident (See Fig. 24).

Re claims 2-3 and 13-14: Tsutsumi discloses that the interval between the reflective slopes gradually become smaller when moving further from a side of the guide onto which the light is incident (See the interval between the slopes 28 in Fig. 2).

Re claims 25-26, 35-36 and 38-39: Tsutsumi discloses a LED as a light source disposed between the first and second surfaces (See 25 in Fig. 2). Tsutsumi, further, discloses a cover to cover the light source (21 in Fig. 2).

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

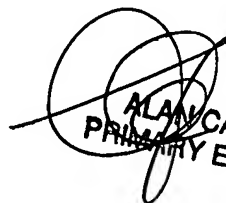
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Guiyoung Lee whose telephone number is 571-272-2374. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on 571-272-2378. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LGY



ALAN CARIOSO
PRIMARY EXAMINER